

A1  
(RFLP), Cycling Probe Reaction (CPR), Single-Strand Conformation Polymorphism (SSCP), heteroduplex analysis, hybridization mismatch using nucleases (e.g., cleavase), Southern, Northern, Westerns, South Westerns, ASOs, Molecular beacons, footprinting, and Fluorescent *In Situ* Hybridization (FISH). Some of these methods are briefly described below.

# **In the Claims**

Please cancel claims 22, 23 and 28, and substitute the following claims for the pending claims having the same claim numbers:

A2  
19. (Amended Once) A method of estimating the susceptibility of an individual to have offspring that develop a developmental disorder comprising:

- SUB B2
- (a) collecting a biological sample from one or more participants; wherein a participant is either the individual or a blood relative of the individual; and wherein the biological sample contains nucleic acids and/or proteins of the participant;
  - (b) analyzing the nucleic acids and/or proteins from the biological sample; wherein said analyzing results in a partial or full genotype for the alleles of the genes involved in folate, pyridoxine, and/or cobalamin metabolism; and wherein said partial or full genotype forms a dataset of genetic explanatory variables for the participants;
  - (c) adding the datasets of genetic explanatory variables obtained from steps (a) and (b) to a genetic reference dataset therein forming a combined genetic dataset;
  - (d) formulating a model comprising the genetic explanatory variables obtained from the participants; and
  - e) analyzing the combined genetic dataset by binary logistic regression;
- wherein a predicted probability for the individual to have offspring that develop a developmental disorder is determined; wherein the genetic and environmental susceptibility of an individual to have offspring that develop a developmental disorder is estimated, and wherein the individual is a pregnant woman.

A3  
24. (Amended Once) A method of lowering the risk of a pregnant woman who has been determined by the method of Claim 21 to be susceptible to have offspring that develop a developmental disorder comprising administering methylfolate, cobalamin or pyridoxine to the pregnant woman, wherein said administering lowers the risk of the pregnant woman of giving birth to offspring with a developmental disorder.

A3 25. (Amended Once) A method of determining if any treatment is advisable for a pregnant woman who has been determined by the method of Claim 21 to be susceptible to having offspring that develop a developmental disorder comprising determining the concentration of a risk factor from a tissue sample or body fluid from the pregnant woman; wherein when the concentration of the risk factor is statistically above or below an accepted normal range, treatment is advisable.

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A4 Sup BH 29. (Amended Once) A method of treating an asymptomatic individual determined by the method of Claim 21 to be susceptible for developing a developmental disorder comprising administering methylfolate, cobalamin or pyridoxine.

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